From Urban Space to Future Place

The UrbanIxD Summer School 2013

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From Urban Space to Future Place – The UrbanIxD Summer School 2013

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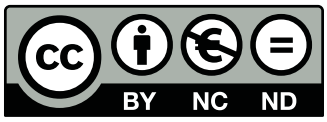

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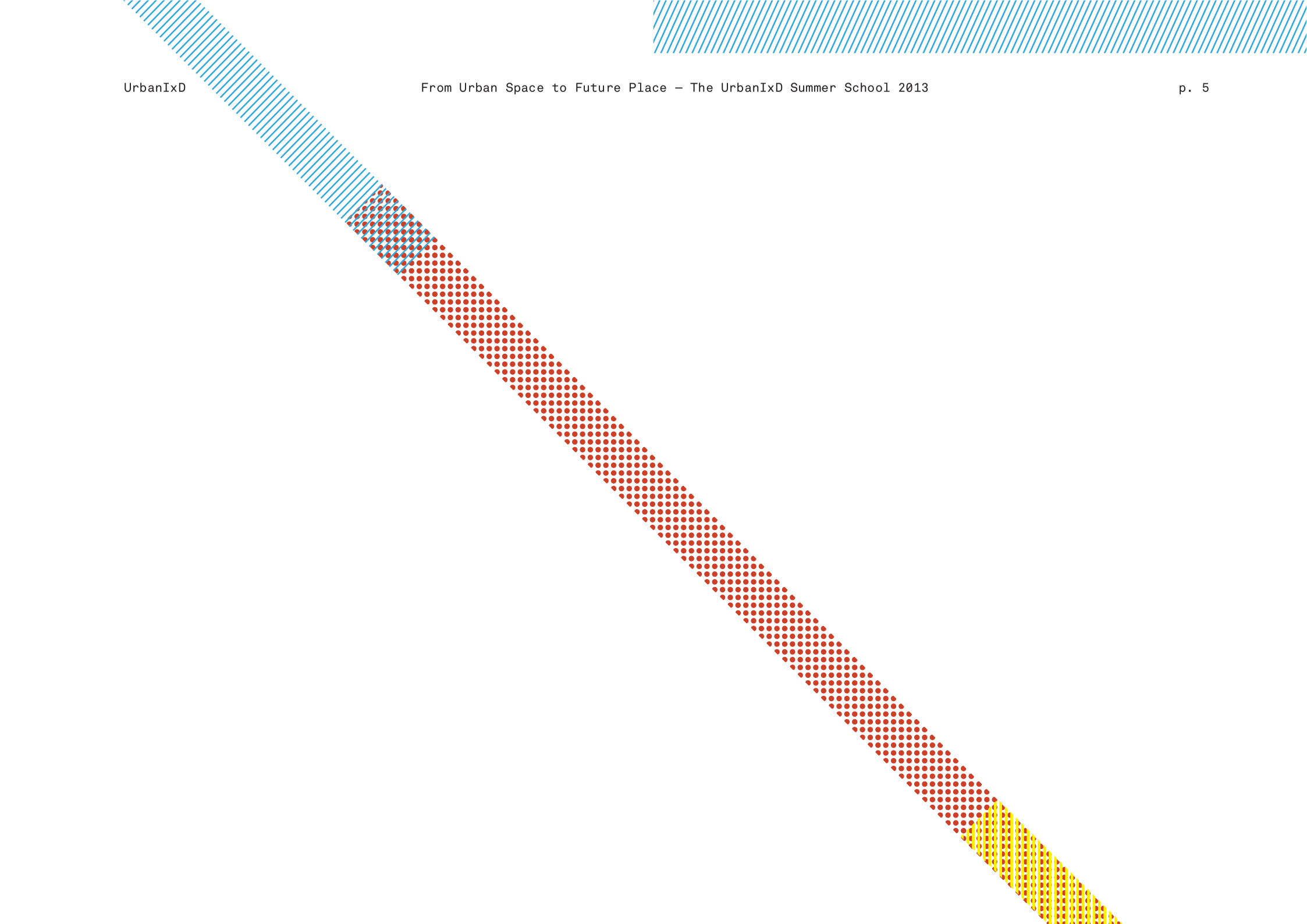


Urban Interaction Design

The context

Urban interaction design is an emergent field of research composed of three main elements; technology, urban space and people. It addresses the question of how we, as physical beings, will interact with the technologically augmented, data-rich urban environments that increasingly characterise cities.

Cities have always raised particular issues for technologists and researchers. They are the settings for multi-disciplinary activities on micro and macro scales, from major infrastructure projects such as transport and communication systems to single instance sporting and cultural events. The ambitions of those tasked with city development may remain broadly stable, but there is now a major shift occuring in the speed at which transformation can take place.

Another factor in this urban evolution is the enrichment of the physical space with a myriad of communication technologies. These diverse, layered networks are able to read many kinds of information generated by the urban environment and its inhabitants, and are also capable of reacting and altering city space in response to this data. As individuals we are implicit in this process, adding our personal mobile devices to the environmental technological mix.

Much of the debate in this emerging domain has centred around the topic of the 'smart city' and more specifically around the question, how can the deployment of technology make a city more responsive and subsequently be perceived as ‘smart’ by its inhabitants? Cities, with the support of technology providers, are exploring how sensor networks can gather data about the city and its inhabitants and how this data can inform the performance of the city. This top-down systemic approach has a focus on infrastructure issues such as transport and pollution monitoring with overarching topics such as big data.

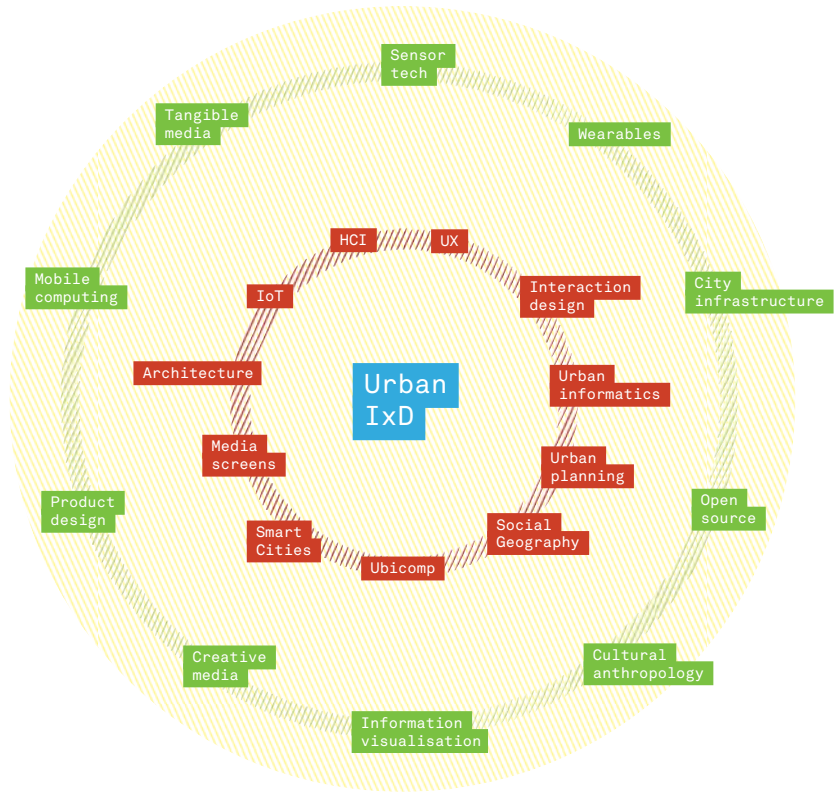
As yet the trajectory of this research is unclear. Across the globe there is a steady growth of

purpose built cities. Examples include Masdar City in the United Arab Emirates, PlanIT Valley in Portugal, and Songdo International Business District (SIBD) in South Korea. Each one of these developments acts as a living laboratory for the design and deployment of fully integrated solutions. However, older established cities are not exempt from this process of data layering. What is certain is that citizens must have a voice in how their cities develop, as it is people, not infrastructure, that makes cities smart. Ultimately we must remember the simple fact that urban techonology should be designed to be for the benefit of citizens.

Drawing from the established field of human-computer interaction (HCI), urban interaction design is rooted in the wider field of interaction design (IxD), from which it takes much of its emphasis on behaviours at the human scale.

While the top-down systemic approach indeed leaves a sense of lack of human agency and choice, it is important to remember that as with any interaction, this relationship too is a two-way dynamic exchange.

The need to bring a more human centred dialogue to the debate around the future of cities is made more pressing by the trend towards migration to cities and the growth of mega-cities across the globe. It is predicted that by 2050 more than 70% of the world's population will be urban. In Europe this is already the situation and the primary lived experience of Europeans is urban. In addition to a growing urban population, the urban space involves an increasingly complex group of stakeholders: urban designers, city planners, politicians, activists, street artists and of course ordinary citizens. Everyone is creating, altering, using, misusing, claiming and reclaiming the urban space.

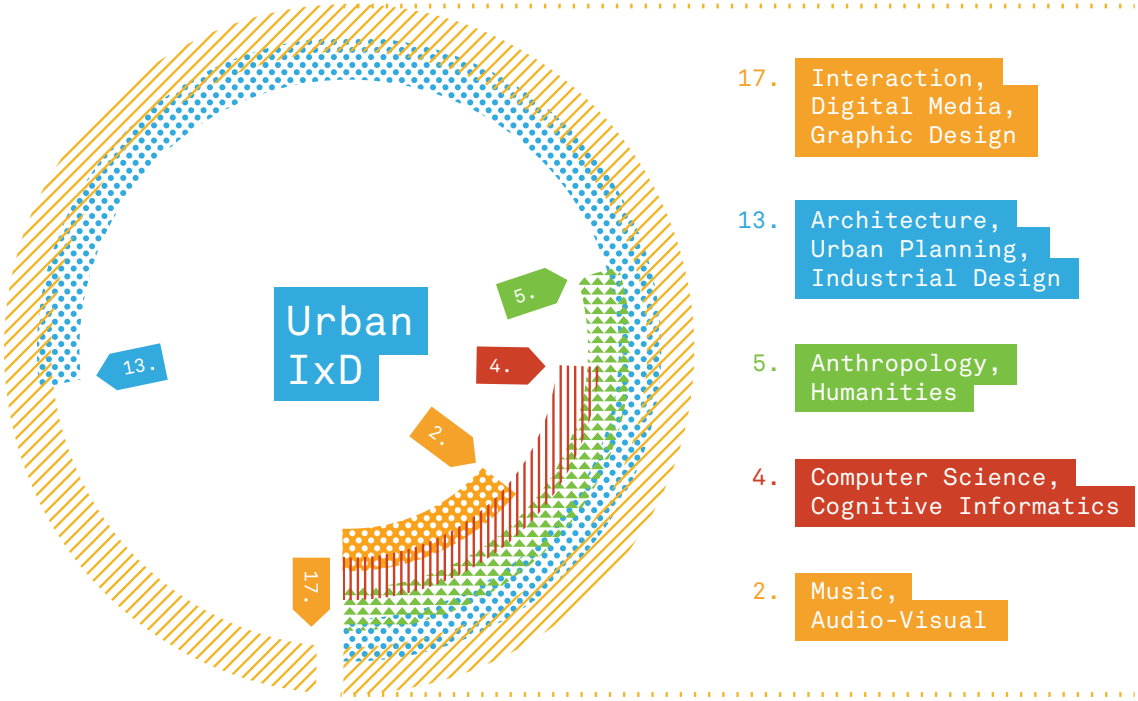


Thus, the urban space can be viewed as a space for continuous negotiation. In order to be able to engage meaningfully with this setting, the UrbanIxD Project organised a Summer School in Split, Croatia in August 2013. This event deliberately sought out a multidisciplinary group of participants with a wide range of backgrounds and skill sets. As well as exploring the disciplinary boundaries of the domain of urban interaction design, an aim of the summer school was to make progress towards defining the important questions, issues and challenges that the field should address, now and in the future. Discussion and debate are, of course, useful methods towards arriving at shared understandings, but the act of creating design outputs, in the form of objects and scenarios can also be used to express and develop mutual knowledge, and this is the approach chosen for the summer school.

The summer school had the explicit desire to explore future scenarios of urban interaction design; to facilitate this aim it adopted the overarching methodology of critical design. Critical design as an approach to creation, in common with its close relatives, design fiction and speculative design, concerns itself with making tangible objects and refined scenarios that may become real at some point in the future. Presenting themselves only as possibilities, they pose the question, "what if?", inviting consideration of the potential impacts of shifts in technological developments and societal attitudes. The impact of this approach relies on how convincing designed artefacts are; the objects seem feasible yet strange, leaving the viewer to wonder about how far they draw on existing technologies and how much of this is invention. Critical designs sit somewhere along a spectrum between realism and fantasy, and the boundaries are blurred. How deliberately provocative these fictions are depends on the individual creator, but the response belongs to the viewer, who is free to interpret.

We are familiar with the genre of science fiction which has a long history as a method of providing detailed situations and scenarios, populated with characters that a reader or viewer can identify with. Critical design shares many of these techniques, and both genres seek to connect human beings with these imagined people and their worlds. The skill of filmakers and designers invites us to care about imagined lives by projecting our own motivations, desires and fears onto them. Narrative, real or imagined, is a powerful force for considering universal human concerns at both individual and societal levels, and this storytelling approach can be brought into design. Using the concept of the 'perceptual bridge', described by James Auger (2013) as the means by which design can engage audiences, design can be appropriated from the practitioner's world of industry and engineering, and recast as a catalyst for imaginative projection.

Description of the Summer School



The UrbanIxD Summer School took place in Split, Croatia from the 23rd of August to the 1st of September 2013.

With 40 participants representing a variety of disciplines, coming from across Europe, and some from further afield, the summer school consisted of four ateliers faciliting group work, as well as a series of lectures, field trips, film screenings and social events.

Speakers were:

Andrew Shoben, the founder of greyworld, a world renowned artists' collective who create art in public spaces.

Nicolas Nova, a writer, ethnographer, and a consultant at the Near Future Laboratory.

Dinko Peračić (Platforma 9.81) collective of architects from Croatia, engaged collaboratively and independently in the critical rethinking and debate of urban planning and public space.

Susa Pop, an urban media curator and producer based in Berlin. In 2003 she founded Public Art Lab (PAL) as a network of experts from the fields of urban planning, new media arts and IT.

Liam Young, an architect who operates in the spaces between design, fiction and futures. He is the founder of the think tank Tomorrow's Thoughts Today.

As part of the summer school the documentary film *The Human Scale*, directed by Andreas Dalsgaard, was sceened. The film questions our assumptions about modernity, exploring what happens when we put people into the center of our equations when we study human behaviour in cities.

The UrbanIxD Summer School was a part of the UrbanIxD: Designing Human Interactions in the Networked City -- a two year FP7 coordination action co-ordinated by four partners in Croatia, Denmark, Italy and the UK.

The Brief

On the first day of the summer school all the participants received the following brief. Descriptions of all the projects created by the four atelier groups are included in the Projects section at the end of this document.

Seams and Boundaries in the Hybrid City

Explosive innovation and adoption of computing, mobile devices, and rich sources of data are changing the cities in which we live, work, and play. It's about us, and how computing in the context of our cities is changing how we live. It is envisaged that the urban spaces of the future will be saturated with both visible and hidden media that gather and transmit information. How we as physical beings connect with, interpret and shape the increase of data residing in our environment will be a significant challenge.

Brief

The concept of 'Big Data' has become intimately linked with the vision of the 'Smart City'. The Smart City might be the campaign, but it will be over Big Data that the battle for the city will be fought.

So where does this Big Data reside and who gets to see it, let alone make sense of it and use it?

The Hybrid City is an environment that comprises both the tangible and the virtual. It is a place where data resides at the boundaries of the physical and the digital. This landscape is made more complex as these seams ebb and flow with time and place. The experience of data might only be fleeting and transient.

What are the products and services that citizens of the near future will use to create and consume data in the Hybrid City?

What will the toolkits of these ‘data hunters’ contain, and how will they explore the space between and beyond buildings as they seek to understand the urban environment through interaction rather than delineation?

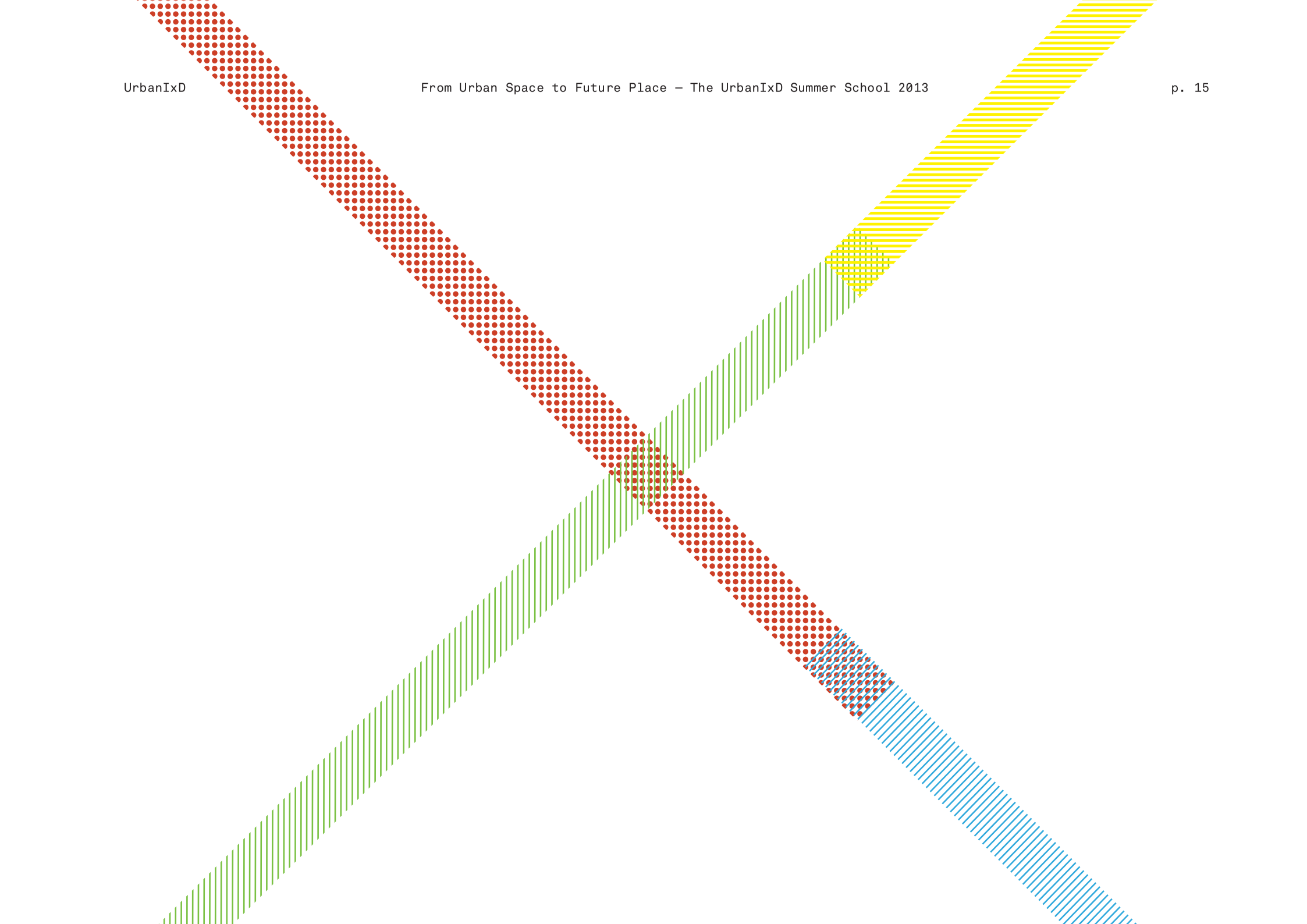
Their mission is to identify the seams, and reveal the data, as only once this is uncovered can we really know of its existence and meaning.

Outcome

The goal of the Summer School is the production of fictional concepts that explore the active role of citizens as designers, users and inhabitants in the emerging socio-technical situations that might characterise the Hybrid City of the near-future.

At the conclusion of the School you will have produced an output that is ready for exhibiting to the public. Your display should be understandable to visitors, but does not have to be a fully working prototype.

Process framework



Introduction

Throughout the summer school, we have observed three significant external factors influencing the critical design proposals: people, space and time. This chapter approaches each from a threefold viewpoint: three ideas about time, three factors that influence the ways in which space is read, and three standpoints towards people-oriented critical design in relation to urban interaction design. Notably, throughout design processes these aspects are all closely intertwined.

People

The UrbanIxD Summer School approached the topic of urban interaction design through a critical design perspective and by the use of design fictions. This novel mixture enabled the summer school participants to explore the utility of this approach, and to locate it within wider design practice. The intended audience for these design fictions was not only practitioners working within urban interaction design and its related fields, but also at a wider level it was hoped that they would generate dialogue about future urban issues.

Design is utilitarian and aimed at people. What happens if the levels of involvement of these people are low or non-existent? From the point of view of the UrbanIxD Summer School and future practice it is an interesting yet delicate matter to ask what the value is of including or not including local residents in the creation of design fictions. Therefore *thinking for people; thinking with people* and *thinking about people* are three approaches worth discussing in the creation of futuristic scenarios within the context of urban interaction design. All of these standpoints have the potential to generate challenges as they are reliant upon resources available to the designer or the varying interests and perspectives of different stakeholders.

Thinking for people would be led mainly through basic research on human factors.

Thinking with people would entail participatory design or ethnographic research as the main methods in the development of concepts.

Thinking about people; here the concept would be contextualised through theoretical and practical input from a designer.

Design can be aimed at the near or the far future and it could be argued that these approaches lend themselves to addressing particular stages along this continuum. In the case of *thinking for people*, the brief is usually set to resolve a perceived problem in the present. *Thinking with people* uses people as a resource to gain insight about their everyday lives and needs as so reveal design

possibilities across this whole continuum. Finally, *thinking about people*, enables the designer to engage in a level of informed speculation about the far future. These three approaches will be now discussed as they emerged at different stages across the various design fictions generated during the UrbanIxD Summer School.

Thinking *for* people

Designing products based on a general model of the user population, in isolation from particular groups of users or with low levels of user participation, is a common top-down design practice. The process usually follows a design brief structured around a series of questions stating the purpose, audience, time, place or the most crucial issue to be resolved.

This type of a approach represents the interests of a particular party or client employing a designer whose skillset would allow for a specifically targeted product to be developed and for a particular need to be fulfilled. The design practitioner might use tools such as pre-defined user-inspired personas to visualise their audiences and respond to their needs without the necessity of timely and costly investigation. This method might be flawed if it becomes driven solely by economic factors or if it fails to investigate the appropriate audiences and consequently proposes generic solutions. If used appropriately, it can provide well needed products and services. In the context of the UrbanIxD Sumer School the Necrotopia project created a scenario that was a representation of this well applied process. As a way of focusing the project's work and as part of a visit to the city this group began to consider the future of death and the experience of bereavement. The was in effect a self-set sub-brief that provided a positive constraint for the group.

Thinking *with* people

No city is the same. So it is imperative that local citizens are engaged in dialogue at an early stage in the design process if the aim is to provide meaningful products and services for urban environments. As urban spaces are an arena of varied dynamics between different communities and agendas, approaches like collaborative creation (co-design) provide representative data about the stakeholders involved and their requirements.

Thinking with people in the production of design fictions would include elements of ethnographic research. As an example, an ethnographer, interaction designer and urban planner working on the UrbanIxD Summer School *Nokuna* project used ethnographic research methods such as interviews with local residents as a starting point for their process. Among others, a local fisherman's story about trading his product in exchange for other goods became a source of inspiration for their scenario of a future urban economy. The citizens who provided this insight were not further included in the development of the scenarios or their evaluation. It was felt that the development of the scenario is a job of the designer rather than his or her inspirational subjects.

In context of the evaluation, the projects ought to eventually fulfill the promise to generate discussion. The medium chosen to present the scenario or design fiction should be in a format appropriate for enabling discussion with a wide range of audiences. Importantly though, the final design fictions were not a full reflection of the complete work produced during the summer school. In conversations with other participants it was often agreed that the theoretical and conceptual discourse that continued for the duration of the school and beyond was a more intangible yet crucial outcome of the event. This publication aims to put a fraction of these conversations on paper.

Thinking *about* people

One approach to *thinking about people* involved the creation of design fictions through a theoretical and conceptual discourse among UrbanIxD Summer School participants. The

summer school ran for eight days, and as a result, provided restricted opportunities for engaging directly with the local citizens of the host city. To counteract this, observations of everday lives in public space were used as design inspiration and as catalysts for idea generation. Faced with the inability to gather comprehensive insights from the citizens, the summer school participants began to use themselves as subjects, feeding from their own background, experience and perception of the place. These directly informed the resulting design fictions. The participants, informed by the lectures that formed part of the summer school, discussed topics including: space and place; citizenship; feeling at home in a city; factors affecting movement in urban environments; roles of technology; and finally, values that might lead a potential urban explorer. The discussions were informed by the consideration that "what begins as undifferentiated space becomes place as we get to know it better and endow it with value." (Tuan, 1977). The values that were emphasised included: humanising data rather than remaining a datafied human; revealing the 'seams' of the city; and issues of contribution and consumption as they related to place.

The overarching approach to the technological aspect of urban interaction design stemmed from the belief that:
"the killer app for technology infused cities isn't efficiency, it's sociability. It's creating new conduits for information to flow between minds, to coordinate them, allow them to make collective choices about how they build and operate urban systems. That's why some of the most exciting new technologies aren't the ones that invisibly optimise and act in our interest in the background, but the ones that plug us into each other and into local government to act together. Whether they choose to use the capacity to create cities that are rational or serendipitous is up to them, really. That's the beauty of cities; like people, no two are alike." (Offenhuber, Schechtner, 2012).

This *thinking about people* process was not aimed at delivering a particular product but at questioning the desires or fears of particular individuals in a particular space, at a particular point in time.The Future Cloud is Buried project brought the issues of misbehaviour or misuse of the technologies into the discussion. This fiction speculated about how all 'Splitsonian' data would be buried in a cloud outside the city boundaries, triggering the emergence of a new pirate-tourism industry or a new drug scene. How do we discover what these misbehaviours would entail? Ethnography, technology and design are some of the disciplines brought together for the occasion of the summer school with the aim of providing a valid knowledge on these potential behaviors and stories.

The application of critical design

What follows are some observations regarding what urban interaction designers might consider when applying critical design to articulate future urban issues on a human scale.

Validity

Having limited access for interaction with local communities generates an issue in terms of gathering data that may inform a final concept. This may affect the outcome or the process depending on which of the approaches to people is used: *thinking for*, *with*, or *about* them. Time constraints are always present in the design process and to this extent urban interaction design is no different. This short-lived relation to a city has the potential to cause frictions or anxieties for the designer. Once this is acknowledged, these time constraints might be acted upon and utilised as one of the starting points in the design process. In relation to the timeframe, decisions can be made to either *work for people, with people* or *about people*. This might prevent the design agendas of the local community or, indeed, the designer(s) themselves from being overclaiming, misunderstood, or misinterpreted.

It is important to acknowledge that most of the participants thought *about people* rather than

for or *with* them when using the critical design method during the UrbanIxD Summer School. This situation could be explained by the fact that the participants created design fictions that were, in general, informed by their previous knowledge and a discourse on a smart and a hybrid city. Arguably, this may be read as a top-down approach, championing the designer over the needs of the citizen. On the other hand, although the designers were not consulting upon the scenarios with the communities in a traditional sense, they were also not proposing any physical changes to the environment. From the perspective of the designer, the sense of belonging is becoming increasingly virtual. Arguably, being a part of a community does not always depend on physical presence in the space but on the quality of one's connection to that location. A short-lived physical relation with the space need not be an obstacle to creating a powerful scenario inspired by that space.

Without claiming to be introducing physical changes, the fictitious scenarios used as a tool for critical design might represent possibilities for sustained interactions with urban communities. Another possibility is that design fictions could act as a spark for reflection or inspiration for a particular interaction in the urban space. Numerous design scenarios made use of personas, based on very particular values established through a short yet intense examination of the site-specific human-scale context (e.g. observation of human patterns in the environments). What does this mean for the process? Although potentially thinking for people, the designers might actually decide to 'unfamiliarise' themselves with the city in order to look at it with a pair of 'fresh eyes'. This mechanism of estrangement towards an environment was used as a tool for thinking either *for* or *about* people in a short time frame. This approach will be illustrated as follows.

In the situation of the summer school, a particular inquiry was tackled: 'Seams and Boundaries in a Hybrid City'. With this in mind, some observations were made about how the people of Split were using their city in the present. In particular, which areas of the city were not being used. This observation provided input into potential scenarios proposed to be either set in or inspired by those spaces. For a team working on the *Backspace* scenario what became apparent through observation of people were the locations where the people were clearly not present. These spaces, abandoned and neglected became intriguing for a designer wanting to deepen the relationship with these territories through "not administrability, but concernment; not distance, but involvement; not demarcation of boundaries, but reference; not dominance, but visibility; all aspects of social integration". (Offenhuber, Schechtner, 2012). A fictitious persona of an 'Urban Data Explorer' was developed as part of the *Backspace* project that aimed to reveal the hidden emotional layers of urban space with use of future technologies.

Credibility

The issue of credibility of design fictions raises a number of questions concerning their potential for provocation and reflection. Firstly, what makes a design fiction credible as a valuable design outcome when created by 'outsiders' to the space? Deriving from this, how would we approach the validation of critical design as a design method for sustained engagement? What would be the role of thinking for, with and about people in this context?

Secondly, is basing fictitious scenarios on real people actually the answer? Design fictions aim to project desires and fears of here and now into an imagined space and time in the future. While considering abstract time and space, what are the consequences of looking at abstract people? Stories relevant to a particular space rather than an individual may still affect people on a very personal emotional level. Urban space of Split might still became a point of contact, a common clue between a designer and a community. Through this spatial clue the community might be able to make a closer connection with a concept and hopefully react emotionally, positively or negatively, to the story proposed.

Would the urban interaction design field benefit from the equal evaluation of all: thinking for people; thinking with people; and thinking about people? This might provide a future framework for working and collaborating across urban spaces. It would be exciting to observe how the application or even definition of critical design would vary when used across these three people-conscious approaches. Ultimately, the assumption ought not to be that every critical design scenario will have a powerful impact. This depends on an audience-appropriate narrative, use of believable personas and the conceptual strength of the scenario itself. In order for this type of critical design to become the beginning of a long-lasting dialogue, a sustained interaction, the responsibility to say the first meaningful word in a conversation lies in the hands of the designer.

Space

The physical characteristics of a city influence our movements and activities, and in turn our behaviours modify and shape the city, influencing its spatial identity. Even though in recent years public places have become more focused on providing space for mobility, the main characteristics of space are still its openness and accessibility, crafted to host a wide range of civic activities, encourage social interaction and sustain social cohesion among its users. Therefore, ideas, concepts and proposals for urban interventions are ideally informed by a deeper knowledge of the surrounding physical environment, in order to facilitate more qualitative and sustained urban interactions to take place between people.

Even more so, critical design interventions provide a platform for citizens to critically reflect upon their local environment. This however stresses the importance of tapping into rich collections of knowledge about a space voiced by its users. Examples include local residents providing insights into local history or tourists providing insights on accommodation for visitors. Other approaches include observing and documenting how different groups inhabit, use and take ownership of space over the course of days, weeks or seasons. Space therefore encompasses the physical space where interventions are installed or take place, such as a square, public space or private courtyard, in addition to the social space that is constructed through dialogue and interaction. This could, for instance, be through discussions between remotely located friends on a theme a critical design project has brought to light.

Three main factors during the UrbanIxD Summer School influenced the ways in which a space was read, consequently informing the design of the 15 concepts:

1. *The implicit rules of the space; architectural and urban properties of space, as well as use or ownership by, for example, inhabitants and tourists.*

2. *The diversity of people's backgrounds and vision on space; in the context of the UrbanIxD Summer School, a multidisciplinary team of 40 international designers, researchers and scholars.*

3. *The locality of the environment; the city of Split as well as the space where the UrbanIxD Summer School has taken place.*

This chapter elaborates on each of these factors, and exemplifies how the design of each of the projects was uniquely shaped through them.

Rules of space

As already discussed, the field of urban interaction design appropriates expertise from various disciplines on various levels. On the level of urban design, this involves looking carefully at the space that is being designed for, through various lenses. They range from physical reality -- buildings, materiality, composition, availability of facilities and general condition; to quantifiable parameters -- users and uses of space, needs, desires and concerns; and on to socio-demographic structure and intangible values like culture, appeal and overall atmosphere. As critical design has proven to be beneficial in influencing and disrupting existing uses, relations and appreciations of products, devices or habits (DiSalvo 2012: 7), its application in an urban environment is as yet relatively unexplored. This exploration, in fact, was the ambition of the UrbanIxD Summer School. The various lenses through which the 40 participants read, interpreted and embodied the (implicit) rules of public space, resulted in two major domains for projects to focus on; integration in seamless environments, and the revealing of seams, i.e. spaces that are 'not right'.

Projects that have a seamless nature have the potential to integrate well with the surrounding urban context. Therefore they may confuse the nature of these spaces and cause a hyperlocal 'glitch'. This in fact triggers and motivates citizens, or any user of the space, to critically reflect on a local issue, the space in itself or the relation with the surrounding environment; topics that the critical design project brings up. As an example, the summer school project *Subjective Open Data* aimed at providing citizens with a suite of developer tools that allowed them to tap into a future repository of large open datasets containing a constant stream of subjective emotions and feelings. The services described in this project could only read data, but presented it in ways that might evoke thought from the people seeing it.

On the other hand, the political nature of critical design provides a framework for deployment in 'glitched' spaces, spaces that are seamfull, 'not right,' or 'not as they are supposed to be,' such as an abandoned garden. During the summer school this was regularly called 'hacking a space,' i.e. intervening in an existing (accepted) context through an emotionally motivated reading in order to reveal a potential underground activity, and to spark new kinds of interactions between the people using or inhabiting the space. Such a bottom-up approach rewrites basic interactions between people, likely producing more disruptive, emergent behaviors (Offenhuber, Schechtner 2012: 63). For example, through their embodiment of mobility the projects *People Chain*, *Backspace* and *Ministry of Misinformation* all use existing public spaces as a backdrop for the concept to be rooted. Even though futuristic in nature, their approach allows each of these projects to be deployed in virtually every location across the world. Their use of the existing urban features is a subtle 'hack,' a careful exploration of the hidden features of a space: *People Chain* only provides wireless connectivity when social connections are formed between people present; *Backspace* provides a device for reading human interactions that are embedded in urban spaces and storing new ones, and *Ministry of Misinformation* provides people with distorted urban data to motivate them to change their behavior and perception of space.

The true challenge here lies in identifying the matter of critique in critical design projects, and revealing how it is expected to disrupt or alter existing habits. In this respect, the diverse backgrounds of the summer school participants may have facilitated the thorough investigation of implicit rules 'imposed' by the existing space. *The Future Cloud is Buried* confronted people with the illusion that cloud data is 'personal,' and provided them with the tools to deploy, store, maintain and even bury a personal cloud data repository in an abandoned yet clearly demarcated place near Split, the old city of Salona. From looking back upon the summer school, we argue that insufficiently balancing critical interventions and space may indeed lead to well thought through design proposals that however fail to take into account implicit spatial rules, and thereby not positively contributing to space.

However, a major opportunity lies in revealing the space where such coordinated disruptions have most, or a desirable, impact on people's view on space or overall change, i.e. the 'sweet spot' for critical urban design proposals. Where can a desired audience best be reached? Why at this location? Experience from the summer school indicates that apart from language issues that prevented 40 international designers and researchers from adequately communicating with the local population, also time constraints may have prohibited this team from arriving at the ideal sweet spot, assessing its opportunities and challenges, and evaluating the local impact.

Diversity of vision

As one can assume that 40 international designers and researchers would each build upon their own unique background, expertise and social and cultural context, one can also assume that the lenses through which a space is seen are just as diverse. Whereas anthropologists might concentrate on a societal evaluation of space, architects may focus on architectural, urban or structural characteristics. As a diverse group of designers and researchers (as in the summer school) investigate a space for potential interventions, any preconceived assumptions or judgments on the social, physical or temporal characteristics of space may manifest themselves, and prohibit the designers from forming meaningful connections with the local environment. For example, field study for *Backspace* involved looking at revealing local concerns, primarily litter on the street, based on exaggerations from the typical noisy southern European atmosphere that characterizes the city of Split. It quickly turned out however, that litter was not present – at all. A redirection of the initial design process was therefore necessary.

This is also applicable from the perspective of other stakeholders; how do others look at the same space? Even though we were not really confronted with such situations during the summer school, one can assume that a real estate agent's appreciation of a neglected building may be fundamentally different to that of a local heritage association. Critical design proposals benefit from building a platform for involving a large collection of stakeholders to voice opinions on space, local issues, concerns, qualities or characteristics.

This influences a designer's relation to space to be relatively superficial in nature at first sight, as potentially important qualities may be misinterpreted or overseen or, on the contrary, as details may be exaggerated and a false image may be sketched. However, the intense discussion that was an essential part of the UrbanIxD Summer School provided a solid platform for spatial qualities to be read, analysed and critiqued through the 40 different lenses of its participants that were constantly in flux, and enriched with the vision of the four atelier leaders. Ultimately, this informed the critical design proposals to contain a local value and deeper meaning, while still being applicable in different contexts and environments with different characteristics, needs and concerns.

Even though there is no solid evidence to date on the positive contribution these proposals have brought to the real urban context of the city of Split, one can assume that this interdisciplinary perspective on space at least takes into account

a wide and rich variety of situations, uses and experiences that positively contribute to the experience of space design that interventions inhabit.

Locality

When observing the physical locality of the city of Split, or any city in general, several aspects come into play; the tangible materiality of buildings, streets and open space, the observable use of the city by citizens, tourists, commuters, and the diverse social structure. Also, the process of perceiving a city in all its glory, assessing its rich opportunities, hard to overcome challenges, and potential frictions, is a process that takes a substantial amount of time. It may involve observations, as well as interviews and dialogue with users, but also requires room for thought. Even though time definitely characterises locality, the essence of use and materiality in Split did not change drastically over the course of years, decades or even centuries, yet it may have gained a new momentum. For example the central Diocletian Palace used to be a tourist destination for Roman emperors, which it still is today for many European travellers to the region, or the old cemetery in Sustipan, west of Split's harbor, that has recently been converted into a publicly accessible park; still a public space for contemplation yet differently materialised.

Many of the summer school projects were inspired by this sensitive direction of time in space, such as *Techno Shaman*, a proposal that specifically aimed at repurposing an array of measuring devices from the past as well as their controllers, the so-called Techno Shamans. By repurposing them yet maintaining their classic interface these devices -- in the context of the project -- were expected to help parse the abundance of data in the world we will inhabit for bringing clarity and adding meaning. Also, the *CUBA*–project (*Coordination of Urban Busy Areas*) built on observations of the city's varied use over time, across space, mostly unique for the city of Split, such as intense daytime use of the historic city center by tourists. It proposed a set of thought-provoking, and thus critical, tools for optimising the use of public space through analysing real-time data, such as people flow, revenue of local businesses, or social media, along with a personalised credit system that allowed or disallowed people access.

One could argue that in the context of an intense summer school format it is not necessarily only the physical construct of the city (Split) and its history that fulfills a role in shaping the critical design interventions that are to take place. Indeed, many participants, atelier leaders and speakers were inspired about the venue in itself, the MKC Youth Center that hosted the summer school at the boundary between the old city centre and the new city districts. Its rich recent history and especially its reconversion into an 'open source building' during the last couple of years provides the necessary scaffolding to structurally support cultural and societal organisations, creative groups and non-profit organisations, and have also served as a catalyst for the thinking process throughout the summer school.

Time

Context can be considered as an intertwined web of significances in which we situate our design processes. Here the issue of time is a crucial element; the passing of time is one of the few universal aspects of human experience. During the total of 460,800 minutes the participants spent in Split during the summer school, three ideas arose about time; time as a resource and constraint, time as temporality and time as an element in the methodology of design fictions.

Time as resource and constraint

Obviously, time is a limited resource. Both in terms of the number of minutes we each have during our lifetime but also as a resource we devote to certain activities and relationships. For the summer school, the resources of the UrbanIxD project allowed for eight days of participant time spent on designing scenarios for cities. During the summer school, the constraints of this timespan brought up tensions about the ambitions of the questions that could be addressed. As participants, our relationship with time went through several transformations during the week, depending on the stage of the process we were in, and on the time left until the deadline.

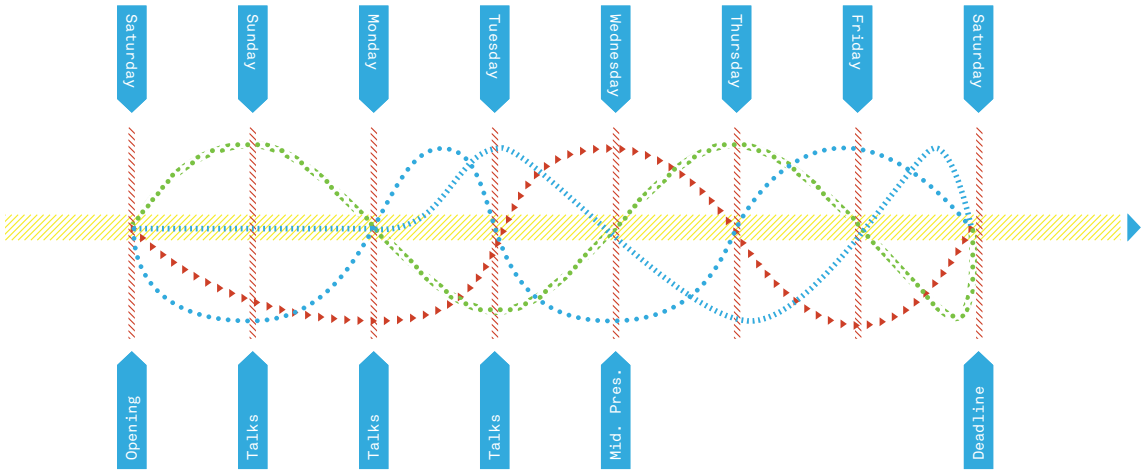
At the beginning of the open, participant-led workshop format, there were one or two days for exploration and general discussions about cities, the urban condition, and the questions we had when thinking about urban interaction design across history, as well as for sharing our own personal experiences of various cities. During the middle days of the school, we took time to express ideas through prototyping, and we consciously set aside time to enable serendipity and encourage turning points, even if this resulted in letting go of ideas that had taken hours or even days to develop. The last night before our final presentations were much more about creating something presentable out of days of intense discussions, prototyping, group meltdowns and our learning about cities and the process of working together. In the end, we did manage to come up with something, so the task was achieved. However it is worth raising questions around what it was that we came up with, and which of the broad thinking and bold ideas we sacrificed for the aim of achieving the task.

In our professional lives as designers or academics, we face a similarly constraining relation with the ticking clock. That does not have to mean that we have to lower our ambitions of designing meaningful interactions in cities. It points to the importance of approaching time-as-constraint consciously and starting to manage it from the first second on. Lastly, we should be honest about the time it takes to approach urban interaction design at a high-quality level. The questions we are facing nowadays are huge, in cities like New York, Copenhagen or Vienna, but also in Mombasa or Bangalore. By having a clear understanding of what we want and can achieve during the time we devote, by being serious about setting enough time aside, and by using time-management techniques and facilitation, time constraints are not so daunting. Time limitations should not be an excuse to avoid addressing serious issues.

Time as temporality

Throughout the workshop we experienced frictions in our relation to time, which point to a second feature of it; temporality. Three issues concern us -- the individual temporalities of those involved in the design process, the temporal aspects of our designs and the difficulty with coping with emergence.

The first point is a general one; each of us lives through several temporalities in approaching the task of designing urban interactions -- some people ideate fast, some will call for decision points earlier, some want to explore longer, some are bored fast and others cannot catch up with the expert knowledge of others. We have to take these individual aspects of the minutes and hours left until deadline into account when designing in diverse teams of mostly strangers. The summer school did not resolve these issues completely but the schedule of the week helped to synchronise our various temporalities. The first four days were divided between atelier group sessions, lectures and the film screening of the documentary *The Human Scale* (2012; Director: Andreas Dalsgaard). These interruptions of our atelier group processes brought us back on to the same page and created shared points of reference through which we could rethink the work we had done inbetween. Having both a mid-week and also a final presentation also provided a frame in which our work took place and did not leave us entirely with our differing temporalities.



The second point concerns the matter we are designing, and the timeframe we have to have in mind for different aspects of the urban condition. When designing buildings in a contemporary Western context, we are thinking in decades, digital apps will most likely be outdated in months. Everything we are designing has a lifespan. This has implications for the amount of time we devote to designs and their implementation, as well as for collaboration with politicians, urban planners and other professionals. We have to think about the consequences of our designs and the larger impact we intend them to have on cities and societies. Certainly, these consequences will never be entirely what we choose them to be and we should resist the temptation of underestimating the agency of users and the world of things. Knowing this, as designers we should consider the potential lifespans, and continue to revisit the biographies of the interactions that we intend to be the consequence of our designs.

As a third broad point, the contemporary is always emerging. There is no such thing as the present except when we look at past contemporaries; tomorrow's yesterday is today. The kinds of technologies, cities, and interactions between citizens that we are able to see at one moment in time does not tell us everything about what will be emerging out of these situations. When thinking about the future, we have to think about the technologies, cities and interations that may possibly emerge from the contemporary. This extrapolation of the present is what makes design fictions powerful.

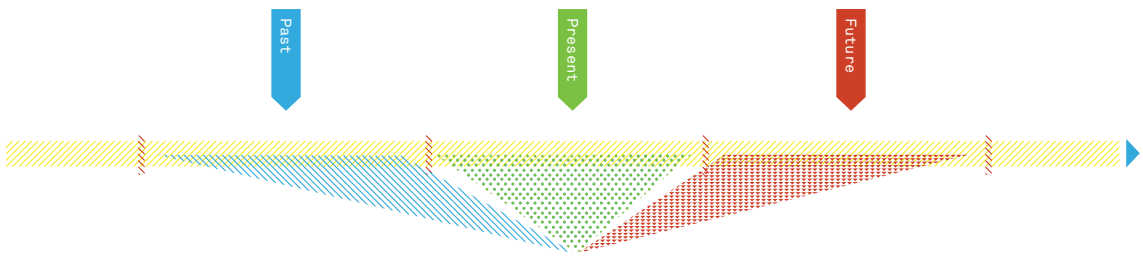
As critical designers, we are not designing solutions but want to qualify questions. With the world changing, the questions we ask are changing as well. For getting to grips with the emergence of technologies, meanings and behaviours, we should think about the ways in which our designs are embedded in an environment in flux.

Time as methodology

One crucial aspect of the summer school methodology was thinking in terms of design fictions. To come up with a fictive scenario, selecting a specific point in time seemed to be a useful starting point for situating the fiction. This supported our thinking about what, where and for whom we should design. The strength of using design fiction as an approach is in making a specific future so tangible that it questions the present. During the summer school, all the participants came up with such scenarios about the future. For thinking through time, each group took a different take on what date in the future their questions were about. Thinking about some era, or even a concrete date in the future helped to spark our creative thinking about the

conditions and contexts we were facing in our fictive scenarios. For that exercise, it mattered a lot whether this date was in 2015 or in 2130.

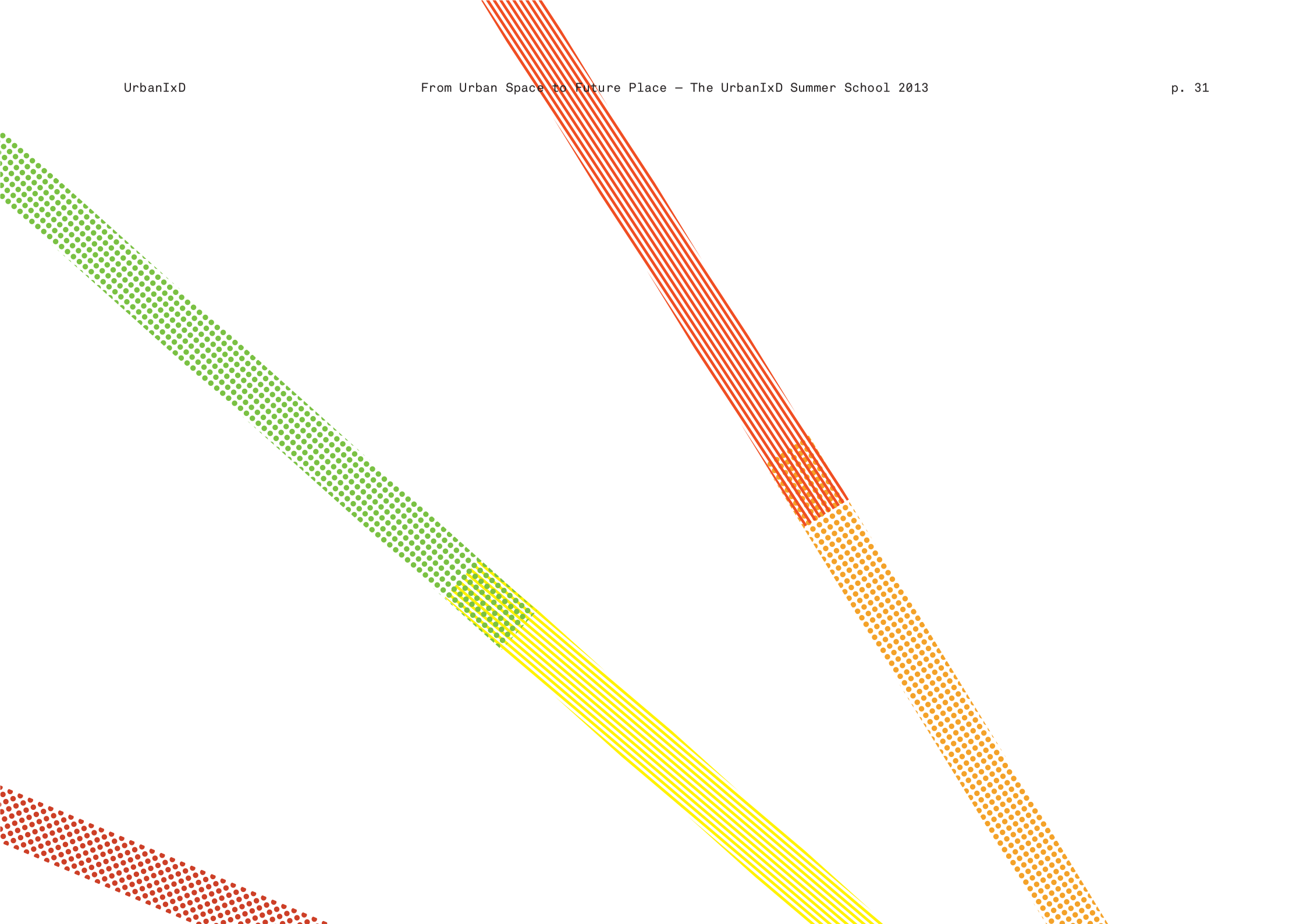
A feature of the future as a setting is that it is forgiving; it cannot talk back. We are free to come up with any sort of situation or problem in a particular date in the future, and creating the design context simply becomes a matter of our rhetorical and creative skills. Whether the technologies, problems and cities really exist need not bother us too much. During the summer school design process, participants were not given alternative designs against which to evaluate and measure their own concepts. The proposition here is to turn this process into methodology, and consciously use time as a methodology.



Neither design fiction nor critical design exist in a strictly futuristic vacuum, as the past indeed informs the future. The *Future Cloud is Buried* project is an example of this. From a field trip to the ancient ruins of the former Roman city of Salona (near today's Solin, around 5 km outside present day Split) the concept of a future cloud burial site right outside Split emerged. Just as the past informs the future, the opposite holds true as well. The novel *The Difference Engine* by Bruce Sterling and William Gibson is one such exploration back into past, exploring an alternate history. Furthermore it's worth noting that design fiction (like classic science fiction) is not limited to a strict Western linear time understanding. As an example of this the *Subjective Open Data* project considered itself to be running in an "alternative present" rather than a future.

During the summer school, participants used time as a framework to look at the world in design fictions. Our learning from thinking through time frames during the process was that we as designers, urbanists, and whoever is active in the paradigm of urban interaction design, should be aware of what might be missed through this approach. While producing design fictions, we should always be aware of the fact that we are, at the very same moment, living in a world of real problems and challenges. In thinking through fiction, we are able to reach wide in our ambitions but we also should resist the temptation of oversimplification of complex issues.

Multi-disciplinarity



Introduction

The UrbanIxD Summer School used a multidisciplinary approach to explore and deal with the challenges of urban interaction design. The school embraced 40 participants from various different fields, who were, during the work process, separated into four groups of 10 people. Each group was defined to include a diversity of disciplines, such as architects, psychologists, urban planners, anthropologists and interaction designers. When working in such multidisciplinary groups there is always a risk that participants will not understand each other, and of the consequences of improper knowledge sharing.

Concerns and qualities

AAs has already been discussed in previous sections, urban interaction design draws upon knowledge and approaches from a range of disciplines. Therefore it has an intrinsic multidisciplinary nature, which requires it to build upon knowledge and participation from experts in various domains. This may involve not just urban planners and architects who deal with city planning, but also sociologists who assess the impact of interventions on peoples' lives, engineers who apply new technologies and systems, and anthropologists who assess peoples' needs and desires. However, the process of designing urban interactions is as yet relatively unexplored and questions are still unanswered; what works best, what does not, how to provide common ground for all experts to work together, what challenges does this raise, and what opportunities do these provide?

Traditionally, multidisciplinary group work and its complementary processes of information sharing are used to expand concepts and ideas, to give them richness, broader perspective and specific knowledge. Nevertheless there is always a concern about the quality of the work and the results we deliver as multidisciplinary groups, as well as our own individual accomplishments. Throughout the summer school, we observed several important issues related to group work, mostly revolving around depth and quality of personal contributions. These involved questions such as: how much are we are contributing and what is the quality of our contribution; how specific are we in terms of personal fields of knowledge; and how detailed, or rather how superficial are our contributions? Building upon observations from the UrbanIxD Summer School, this chapter illustrates challenges and opportunities that are inherent to multidisciplinarity in urban interaction design.

Challenges

In a traditional school environment everybody is supposed to master the same knowledge of one or more areas of study. Along with a classical teamwork approach such as a group of architects working on a design proposal, this develops a

competitive environment, where each individual tends to exhibit mastery of knowledge. In the summer school, participants were confronted with a natural non-competitive environment, as the large variety of disciplines created a pleasant setting where participants learned from each other and disseminated their own knowledge. However, such non-competitive environments pose three unique challenges on the level of the participant; credibility, fear of being marginalised, and role within the group. Notably, these challenges are closely intertwined.

Credibility

In multidisciplinary group work professionals are faced with various disciplines. As such, there is a need for adequately sharing knowledge with one another. This may be hindered by an individual concern of losing personal credibility, but also professional credibility. For example, time constraints such as the short timeframe of the summer school, an absence of interpersonal skills -- perhaps a complete mastery of one area of expertise, yet being unable to make it comprehensible to others -- or misunderstandings, could lead to relevant knowledge becoming oversimplified, and a feeling of letting go of one's expertise. This can lead to the fear of losing credibility in the eyes of other experts, and may build barriers between professionals.

Marginalization

A range of expertise leads to a rich diversity of viewpoints. In the case of the summer school, this not only consisted of viewpoints from the urban designer's perspective, but also from anthropologists, architects, or even music composers with a specific interest in urban life. We observed that discussions often required substantial amounts of effort in order to find agreement. As the summer school was limited in time, differences in familiarity with urban interaction design across the various disciplines were highlighted. These differences may have caused certain participants to feel marginalised in their expertise. It is important to notice that even though the group may influence fear of being marginalised, it could also be very subjective. For example, a participating anthropologist felt not properly understood by others, who mostly had a background in design.

Roles

When joining multidisciplinary groups we should think in advance about the roles we want to fulfill, not only in terms of our own discipline, but also based on skills, previous experiences, and views and perspectives. That helps us, as well as the group, to be more efficient. Also, role is co-defined through collaborating with other professions and finding mutual understanding. As such, we can ask ourselves if we should focus on depth of knowledge -- that is, mastering one's own expertise, or on breadth -- understanding other disciplines.

Opportunities

The summer school provided a venue for multidisciplinary groups to work together, consisting of architects, interaction designers, urban planners, graphic designers, anthropologists, psychologists, and many more. In this process, the need to be open to new ideas and new approaches, and the ability to understand new knowledge, were crucial for its success. Within the short timespan given, creative ways were sought to overcome challenges and be most effective in participation. This brought up the construct of the proactive participant.

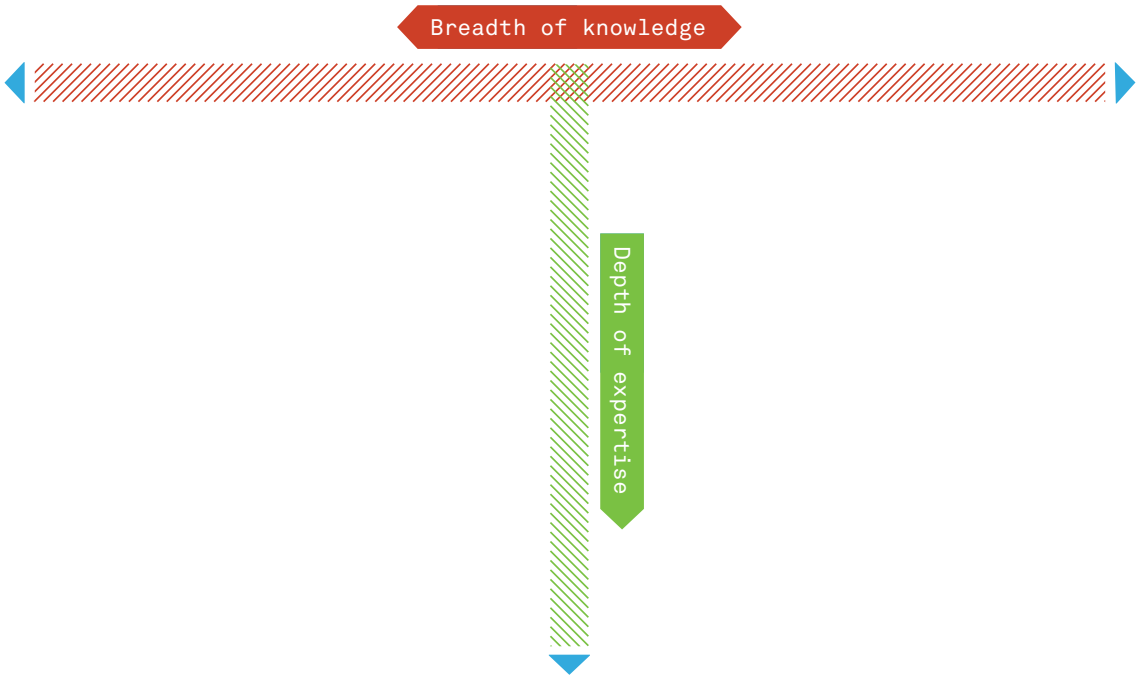
The proactive participant, in a context of multidisciplinary group work, is required not only to have a broad knowledge of other fields, but also to have skills for responding to that knowledge and to guide group work in a consistent direction. Also, a proactive participant should possess certain personal qualities:

Collaboration skills. In addition to collaboration skills in all ranges of professional life, the context of multidisciplinary group also requires embracing aspects such as social competence and respect for other disciplines.

T-shaped personality. Proactive participants should be open to embracing different disciplines besides their own. This does not necessarily mean a high level of expertise has to be reached in different disciplines, yet a basic understanding may help in providing valuable input for the group work to be driven forward. The concept of the T-shaped personality was first proposed by Tim Brown of IDEO and reported by Guest (1991).

Facilitation. The proactive participant does not just think about professional functions in the group, but can also take up roles that are not related to the professional domain, for example; curator, manager, moderator, leader.

T-shaped personality



As participants, we have observed that working in a multidisciplinary environment such as the UrbanIxD Summer School proved promising as a method that enabled learning from other disciplines that are more familiar with a topic such as urban interaction design. However, we can ask ourselves to what extent that even more unfamiliar and unrelated disciplines should be involved. What would be the impact of attracting economists, physicists, and managers in dealing with urban interaction design? Perhaps therefore, the summer school may have provided exactly the first steps towards maxidisciplinarity, where groups consist of proactive participants.

Shared language

The summer school participants represented a diverse set of disciplines that were necessary to explore urban interaction design. Each discipline brought with it a different language, so an important phase was negotiatiating a shared language. However, communicating in the same language can be challenging since each field has its own semantics, paradigms and methodologies. A united multi-disciplinary collective with a shared language has a better chance of drawing on the shared knowledge because they are able to respond and analyse ideas and concepts from different perspectives together, leading to richer dialogues. Achieving a shared language might seem basic, but nevertheless this is challenging to achieve. What are the consequences if we fail to develop a shared language and what can we achieve if we succeed?

A new language for a new field

Finding a tool for knowledge sharing and a consensus about a shared language can be achieved in various ways. This is coupled with the need to invite and involve a multi-disciplinary team into a proactive design process. Based on the broad spectrum of different fields and cultures the participants eventually developed a shared language, but achieving this required a substantial amount of time and effort.

Each atelier leader initiated the group process with a brainstorming session intended to synchronise people and create the basis of a foundational multidisciplinary understanding. This was done in different ways. One group used a triangular brainstorming approach with the discussion revolving around the question, “what does a city consist of?” A second group began by dissecting the tension between big data and the citizen. Finally a third group started their process by asking themselves, “what makes a place, how do we move and what is citizenship?”

The fact that the summer school lectures, screenings and social events were distributed evenly throughout the eight days provided a framework for advancing a shared understanding.

With a diverse set of lectures came a diverse pool of projects, methodology and semantics that worked as continuous reference points in between disciplines. Furthermore, conducting fieldwork provided more practical and site-specific knowledge that became a strong component in developing a shared language. These shared activities played an important role in building bridges between disciplines through practical exposure to the different techniques and methods. However, a strict focus on the structural setup of the summer school is not adequate to bring out the full potential of multidisciplinary synergy.

Definitions and meanings

The group work in the ateliers was characterised by a high degree of creative friction throughout the summer school due to the diverse backgrounds, disciplines and skillsets present. In this kind of multidisciplinary collaboration around an emerging field, it is crucial to acknowledge that terms and methodologies often hold multiple meanings according to the disciplinary lens through which they are being viewed. A basic example of this is how the meaning of the word 'space' differs from an architectural or an anthropological point of view.

As a consequence of this participants were forced to reach a high level of disciplinary self-awareness when engaging in multidisciplinary discussion and negotiation. This process had the further benefit of expanding, questioning the participants' native terminology and understanding by providing radically new ideas and concepts.

Another phenomenon in this process is what can be called 'positive misunderstandings'. Obvious frustration from the friction between different terminologies and disciplines, misunderstandings and serendipity would sometimes occur. Positive misunderstandings are of course relatively rare, but can be great in provoking novel concepts, new insights and breakthrough moments.

Design fiction as a neutral ground

During the summer school the field of design fiction came to serve as a neutral ground for developing a shared language and for multidisciplinary synergy to flourish. Design fiction turned out to be extremely suitable for the given design brief for several reasons. Firstly, design fiction is a wide and emerging field that allows for a high degree of flexibility in, for example, research, duration and finalisation, allowing the participants to produce an end product even in a very limited timeframe.

Secondly, one of the qualities of design fiction is that it offered a 'clean slate' that is not conquered by any specific fields as such, thus creating a good foundation for multi-disciplinarity and scaffolding (Sanders & Stampers, 2008). Because the vast majority of the participants were introduced to design fiction in the summer school context, the genre was explored and interpreted collectively throughout the summer school. The neutral quality of design fiction had the further effect of minimising the fear of being professionally marginalised or not representing an individual's field sufficiently.

The design fiction approach provided enough complexity and scope for exploration and ideation around a variety of aspects and concepts, within a unifying structure. The open format of design fiction offers a seemingly limitless world for designers to inhabit. By choosing design fiction to present our concepts, we were offered a strong format for visualisation and storytelling. Finally, design fictions are easy to produce and therefore gave us few production constraints while at the same time providing us with a large degree of freedom in expression.

Challenges beyond the neutral ground

One of the challenges is to provide each other with the right amount of knowledge in creating a healthy synergy by finding the right balance between simplicity and complexity. This is also true when sharing a neutral ground such as design fiction. One of the negative consequences can be that discussions risk becoming too abstract or complex

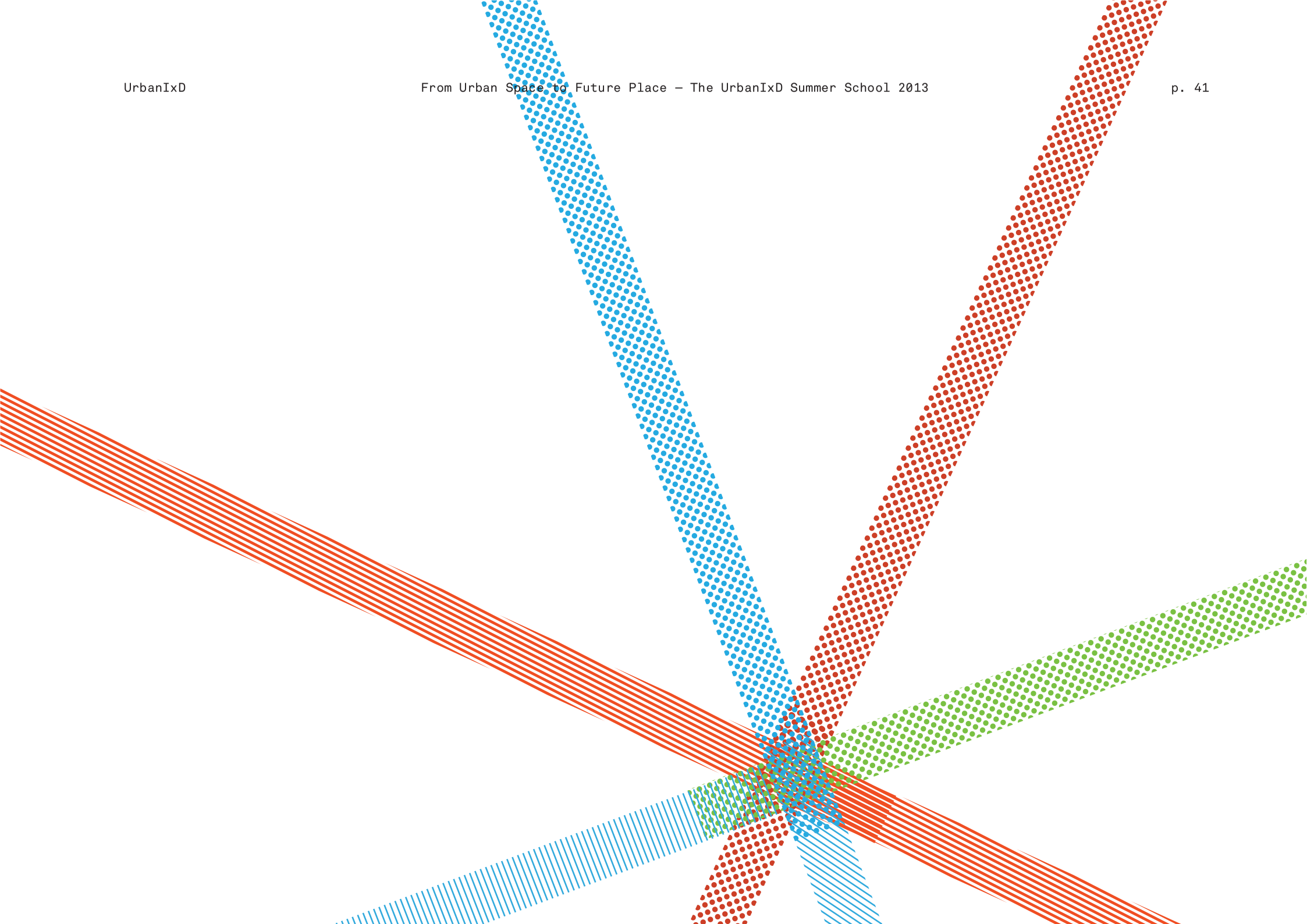
for the individual of a different field to embrace in order to ask critical questions and respond to each other's ideas. If we do not benefit from the shared knowledge in depth, there is a substantial risk that the final concepts suffer from disciplinary compromises and instead become too superficial for any discipline to take ownership. A question that arises from this is how much each discipline can stretch itself and compromise without losing value.

When working as a multi-disciplinary collective we are each representing our own field as a leading expert who suggests interesting paths to explore to the collective. However we also need to facilitate the way that the shared knowledge is put into use. If participants succeed in offering collaborators an opportunity for them to stand on their own two feet and become equal partners in dialogue, we have a better chance of benefiting from meaningful interplay. Succeeding in this we achieve richer discussions that iterate explorations of the depth and breadth of the different fields. As a result these inputs are discussed and analysed from multiple perspectives. One of the project examples from the UrbanIxD Summer School that benefited from this was Nokuna, where an anthropologist and an interaction designer learned from each other the skills of sketching user experiences and designing gift economies respectively. The value lies in using each other as mutual resources for further development and including different kinds of field specific inputs from individuals who are not educated in the respective field.

For multi-disciplinary collectives it is therefore important to extend design methodologies so they explicitly include appropriate tools for communication across disciplines in order to facilitate the sharing of knowledge and to generate synergy. While a neutral ground such as design fiction doesn't resolve all the challenges in multidisciplinary work, it does help to create a useful foundation.

As urban interaction design is a hybrid field currently emerging from a range of different disciplines, the continued aspiration to create a common ground and a shared language becomes even more crucial.

Conclusion



Conclusion

The UrbanIxD Summer School served as a platform for experimentation with critical design, design fictions and speculative design in a real-life urban context, as provided by the city of Split. In this document, we have discussed the overall course of this summer school, the specific challenges and qualities in terms of the process framework that is the urban environment, and multidisciplinarity; a context that is naturally provided by a summer school and the diverse backgrounds of its participants.

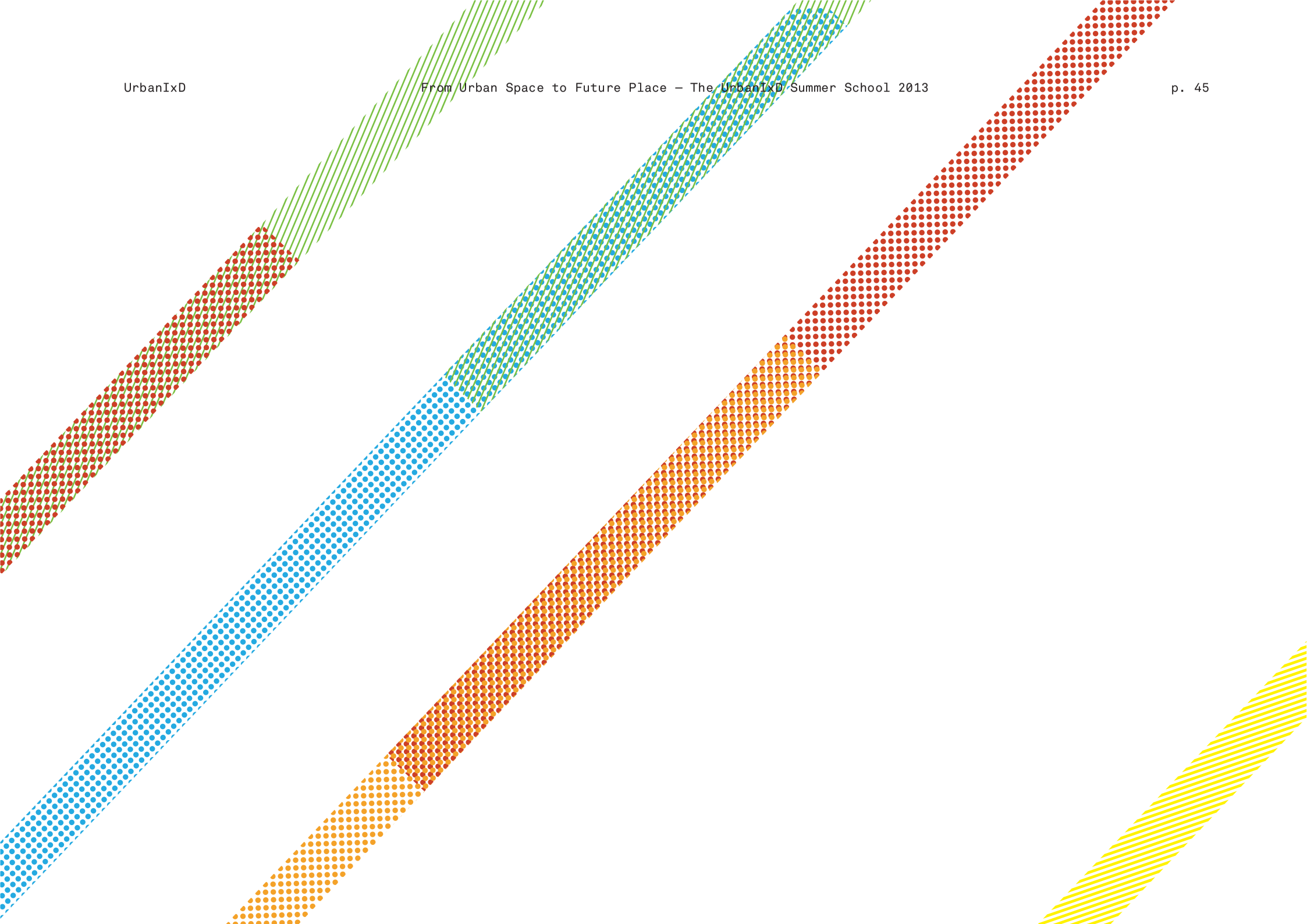
When discussing the process framework, we have argued that a critical perspective feeds into a space and produces a platform for civic discourse. This encompasses the ambitions of the critical design proposal, the urban space where it is deployed including its implicit rules, locality and diversity of people's backgrounds. Ultimately, this may be a spark for critical reflection on local issues and concerns. This process involves people at all of these stages. This involvement varies in degree depending on whether the emphasis is on thinking for people - a traditional design approach, with people - a collaborative design approach, or about people - an informed speculative design approach. Notably, time is an overarching concept, because it contextualizes space and people in light of critical design.

Multidisciplinarity is crucial for the emerging field of urban interaction design because of its complexity. It requires a high level of depth from experts in relevant fields, and also breadth as in an understanding of related and fields.

For multi-disciplinary collectives it is important to extend design methodologies to explicitly include appropriate tools for communication across disciplines in order to facilitate the sharing of knowledge and to generate synergy. While a neutral ground such as design fiction does not resolve all the challenges in multidisciplinary work, it does help to create a useful foundation.

In an emerging field such as urban interaction design, the summer school has provided a forum for exchange of ideas and for networking. In fact, this forum is still active today. We are satisfied that this network of participants has already contributed to shaping the field through the diverse projects from the summer school. Even more so, we feel enthusiastic that this network can continue to negotiate what urban interaction design is today, and will be in the near future.

Projects




Big Data
Fabrika Split
Subjective Open Data
31 august
23 november alternative present
People Chain
september
The Future Cloud is buried
Necrotopia
Nokuna
HappyLess
Displaced City


Humanside
CUBA
Ministry of Disinformation
Aural Fixation
Technoshaman
some things are already happening
Aurora
Backspace
second
first wave of hope
The Price of Memories
Hybrid Citizens

The Humanside Series

Atelier leader
Chris Hand

Atelier coordinator
Hrvoje Živčić

Coordination of Urban Busy Areas (CUBA) (data)

Authors
Luis Veracruz, Jona Dajçi

Since 2030, the City Hall of Split is collaborating with ČISKO to optimize all its resources with the objective of being on the list of Data Improved Certified Cities. The optimization of the public space through the analysis of data is one of the most innovative and challenging projects developed in Split in order to keep the increasing trend of visitors of last 30 years. Citizens will be required to balance their usage of certain areas of the historical center according to some specific regulations, managed by the program "Coordination of Urban Busy Areas" (CUBA).

How it works

— Any citizen will have a specific Usage of Public
— Space units. The individual UPS will be calculated according the taxes paid for the maintenance of the public heritage, but also with the participation in restoration or touristic support programs. Citizens will also be able to exchange local currency with UPS.
— The UPS per hour of each spot of the city will be calculated according to data accurately analyzed.
— The UPS per hour is dynamic and based on the economic incomes made on that area; social media posts about or from that spot but also weather conditions and its occupation peak hours.
— The CUBA App will help citizens to know how many UPS they have and the exact value (UPS/hour) of any specific spot on the city in real time.
— Of course, there are also free spots inside these busy areas, making accessible the city for all the citizens of Split.

Ministry of Misinformation (information)

Authors
Robert Clouth, Sergio Galán Nieto, Han Pham

People are flowing into the future city, and so is the wave of data they bring. The data flows over the city, sticking to the physical. Layers and layers of pixels over the old bricks, transforming our streets, hiding in our homes, showing up on store shelves, manifesting desires, calculating possible behaviors, driving decisions. But what if people become discontented with this future in which big data becomes inextricably enmeshed with the realities, desires and decisions of those living in the physical world? If increasing amounts of data flow into the city, how does it change how we relate to the city and who is using this data to influence us?

The Ministry of Misinformation is an emergent digital movement to distort reality by distorting urban data. These City Hackers are beginning use the trust in the digital layer to subtly change the flow, behaviors and perceptions of how others interact/perceive the city. How can you hack how people relate to and create the virtual and physical by changing the connection between those two layers? Welcome to the Ministry of Misinformation. In a reality made by data, fiction and reality merge in a world you cannot just trust.

Aural Fixation (knowledge)

Authors
Bronwyn Cumbo, Mads Hobye

It is the age of the smart city. Digital data is collected, processed and utilised to optimize. Privacy amongst residents is maintained through the rare art of conversation. An analogue form of data that cannot be detected or processed by the smart city's digital sensors. Friends and families from Split share their personal thoughts within the closed walls of intimate spaces. Their own home. A friend's lounge room. A favourite café. These thoughts, dreams, aspirations for a better future are unheard by the smart city. The bricks and mortar of the city are the caretakers of these citizens. Watching over them as they meet to converse. Capturing the stories exchanged in its walls. Aural prints of words unheard.

A young voyeur lives in the city during these times. Each day and night she roams the streets peering into the windows of these intimate spaces to see how people live their lives. Hoping to catch glimpses of the stories they would share. She senses that the city is full of lost and unheard aspirations. In a local flea market the voyeur purchases an old military communication device and extends its listening capabilities to tune into the frequencies of aural prints. Wearing the device she is able to virtually travel to all corners of the city and hear fragments of the unheard hopes and aspirations of citizens embedded in its walls. She makes it her mission to collect these unheard aspirations.

Techno Shaman (wisdom)

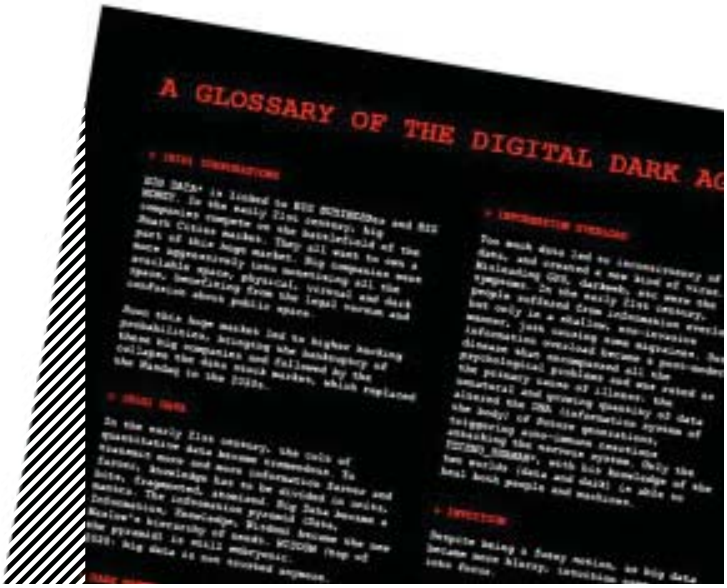
Authors
Divya Viswanathan, Daria Casciani

In the future, most things will be measurable. Data and statistics about people, their networks and the places they inhabit will be captured by personal devices, sensors and crowd-sourced data. There is an abundance of data and people are overwhelmed, unsure of trusting their own instincts and how to make sense of it all. When decisions and perceptions will be increasingly driven by data, what is the role of human judgment and intuition? Will we have to outsource these human abilities to a group of digital data diagnosticians who come from a pre-data dependent age and will be able to make meaning from everything we are overwhelmed by?

Techno Shamans wake up with the city at 8 a.m. every morning, opening up their scales in little niches of the city to bring human-ness back to data. These reliable avatars of trust ritualise the parsing of data from physical devices that store them. They are recognisable by their characteristic measuring devices from the past, repurposed to serve new measurement needs. These scales form a part of the Shaman's ritual, accepting devices of data storage, capturing the weight of data, and allowing him to see meaning that lies hidden in between the bits and bytes.

A glossary of the digital dark ages

Authors
Rachid Belkouch



Futuristic ideas need science foundations so they can be believable and consistent. This glossary aims to provide an integrative and plausible scientific background for the scenarios presented in the summer school, taken from known scientific early 21st century theories.

Definitions include: (Big) Corporations, (Big) Data, Dark Matter, Forecasting, Information Overload, Intuition, Techno_Shaman (The).

The Hybrid Citizen series

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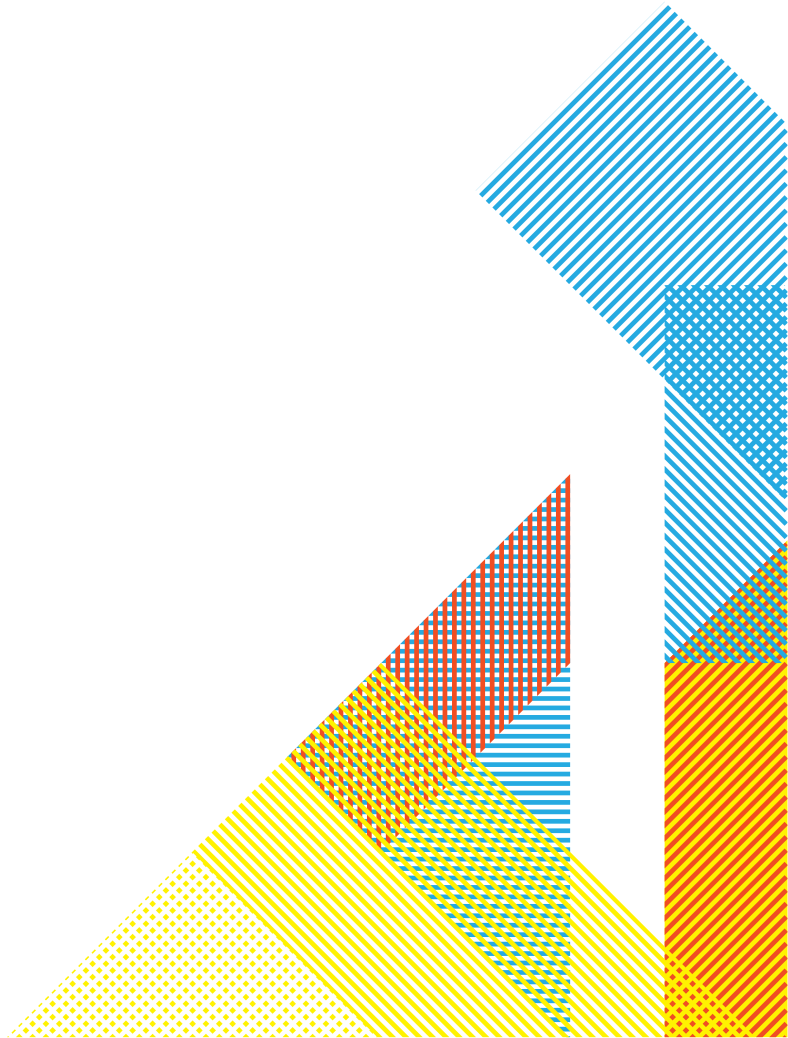
Atelier coordinator
Sara Božanić



The Price of Memories

Authors
Lea Skrinjar, Jure Martinec, Sarah Baron-Brljević

This project speculates about a future where it is possible to transplant memories from one person to another. Even though initial scientific research was conducted for the purpose of medical treatment, plenty of market opportunities supported the development of the technology. A marketplace for memories was established, where memories can be bought and implanted into your brain. A person who has more memories and is more experienced has a higher value. As anyone can sell their own memories by uploading them to the marketplace, users are finding ways to sell more. The world is changing at a much faster pace for the sake of supporting the market growth. Rebuild a square or repaint a room and you can make a brand new memory out of it, thus earning more money. Likewise, creating a memory of something, and destroying it to prevent anyone else after you from creating a similar memory, will keep your market price higher. This is creating a new dynamic in the physicality of the world.

In order to get easy money, hackers are creating devices that enable them to create multiple different memories of a single place. These devices are called 'sense-mixers,' used to alter the sensory experience of a place. However, the memories created under the influence of 'sense-mixers' do not originate from real-world experiences. People who buy too many artificial memories tend to suffer from a new kind of psychological disorder; they are unable to 'read' places and situations through their senses as the sensory stimuli that they receive do not set off the appropriate connections. New medical institutions are opening to treat patients suffering from sensory processing disorders.

Aurora, the Aura City

Authors
Mara Balestrini, Sandro Engel, Ena Hadžić, Assunta Matassa

Cities have undergone profound change. By around 2050 urban population had grown dramatically and resources were scarce. Despite attempts to achieve sustainability, human obsession with owning resources led to the collapse of society. The first wave of hope came in the form of collaborative consumption. This had begun decades before but only minorities had engaged. Citizens started to share their resources to ensure access to shelter, food and transport. Ownership had become a historical luxury. In the beginning the sharing economy enabled encounter, trust and social capital. But desire for efficiency and optimization led to the development of highly sophisticated sharing systems that precluded social interactions. Gradually, equipped with all sorts of sensors capable of recording information from brain activity to visual stimuli, smells and somatic experiences, we began to remotely share the most sensory data about our human experience. As time passed by the streets were empty, people lost agency with the physical world and with others. Public funding was given to researchers working on interactive systems to foster social connectedness.

Now it is 2113 and this is our second wave of hope. Wearing our new technologies, we have achieved ultimate connectivity: we enjoy augmented experiences as long as we sync our senses with others in proximity. Sharing visual data requires that people look in each other's eyes; sharing feelings can only occur if people actually touch. Even memories can be shared, but this data is only unlocked when two or more users reach certain levels of specific neuromodulators. In a society that relies on data sharing for most of its processes, reputation needs to be quantified. Personal Aura points determine your aggregated reputation and whether others can trust you for sharing or not. In an Aura economy, finally, what you give is what you get.

Backspace

Authors
Matthew Carreau, Olga Surawska, Niels Wouters

Backspace is a critical design proposal that imagines a future scenario where technology enables citizens to intentionally disrupt or 'glitch' the urban landscape, thereby reclaiming the city as a site for human interaction and expression. It is a product aimed at Urban Data Explorers, inspired by an ideal to humanize ubiquitous data and to inject emotions into the smart city. Their primary motivation is to reveal, celebrate and preserve the experiences that can be found at the seams of the city, spaces that may be uncertain, contested or confused, yet holding an intrinsic quality through their rich history.

Worn as a backpack – a universal symbol of the wanderer and dreamer – Backspace tunes into human interaction data (stories, memories, emotional fragments) that have been embedded in urban spaces by other Backspace users. As one approaches a space that holds human interaction data, Backspace will begin to broadcast sounds and speech fragments. Opening the Backspace panel and moving it over the general area allows Urban Data Explorers to fully tune into a story or memory. Backspace is a two-directional networked device, a perfect companion for exploring the urban realm. When stories are discovered, Urban Data Explorers should consider responding to them. Layered over time, the contributed memories paint a vivid picture of human experience that stands in contrast to the seamless and frictionless vision of the datafied 'smart city'.

The Big Data series

Atelier leader
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Atelier coordinator
Hrvoje Kedžo

The Future Cloud is Buried

Authors
Soeren Rosenbak, Andreas Foerster, Leyla Nasibova

This is a design fiction project exploring and challenging our notions of what 'the cloud' really is and how this understanding shapes our choices of what we save and where to save it. In 2021 Split decides to bury all its local, most valuable data in an off-grid cloud just outside the city. However, while providing a meaningful physical interface for future Splitonians, the buried cloud also gives birth to a new pirate-tourism industry as well as a new drug scene.

Subjective Open Data

Authors
Peter Kun, Caroline Peta Comino

The Subjective Open Data project is a design fiction reflecting on the growing trends of Big Data, Quantified Self and the Internet of Things. For the project, we developed a fictional book, the Subjective Open Data manual, which simulates a seminal book to utilise subjective data for 'human datapoints'.

The rest of the project explores fictional use cases of subjective open data, covering an emotional compass, which leads to emotional states, emotional talismans, which invoke desirable emotions. We also cover the darker side of this fiction, by using subjective data to control access control into urban space.

People Chain

Authors
Laura Boffi

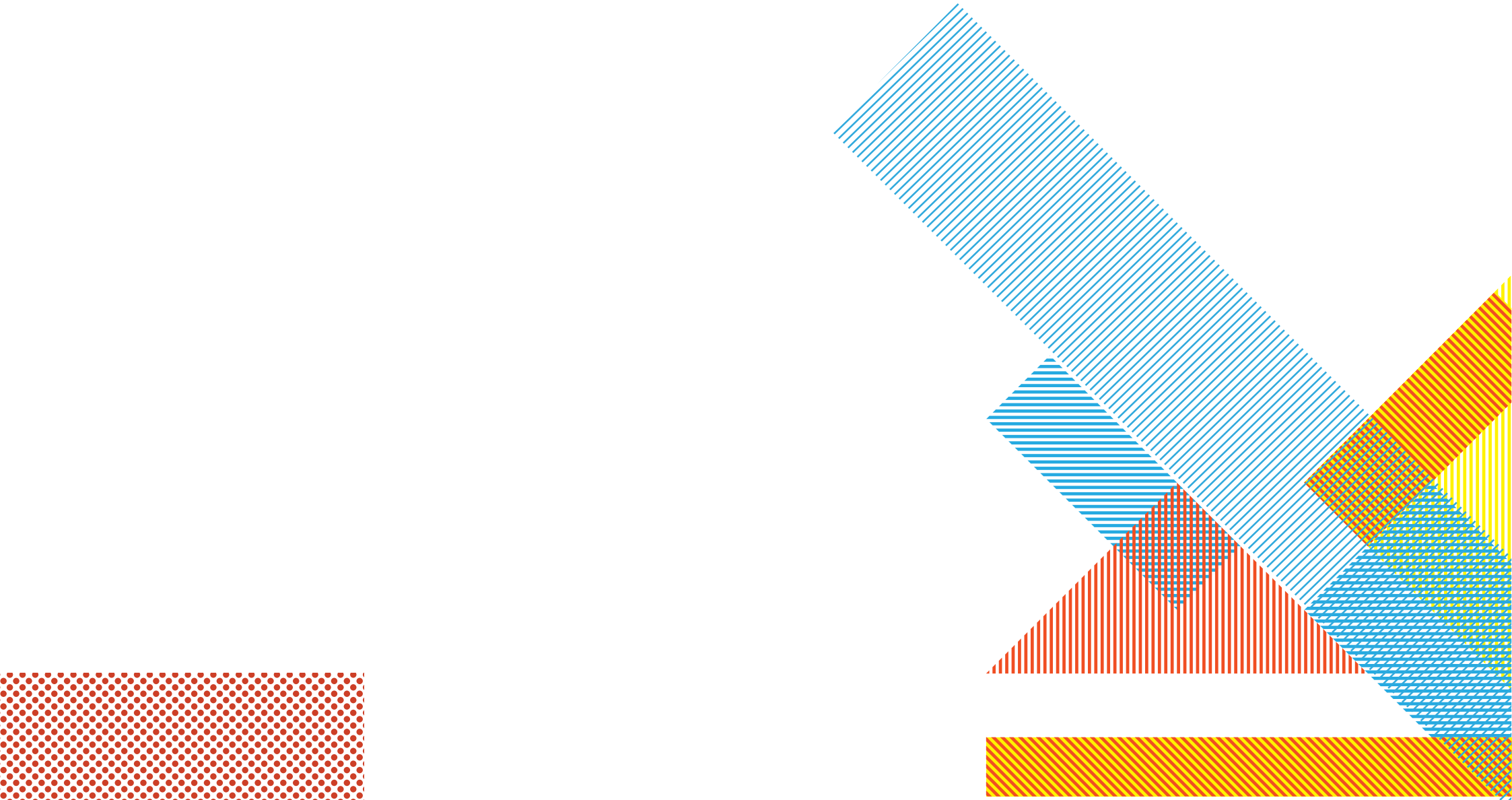
How might we foster people encounters in the city by introducing technology?

People Chain is an urban project that fosters spontaneous gathering of people in public spaces by using technology as an excuse. The way it works is the following: a rope links an orange mark on the floor to a city landmark. By forming a human chain from the orange mark to the city landmark, people will enable a free wi-fi hot spot along that line, thus allowing them to check the internet on their mobile devices while they keep touching each other's skin. The technology behind People Chain is a galvanic skin response switch, consisting of the two electrodes at the rope ends, that turns the mobile hotspot on and off. People Chain was prototyped and performed in the city of Split during the summer school, involving locals and foreigners in forming the people chain to together enable the free hot-spot.

Fabrika Split

Authors
Sandy Claes, Karey Helms, Pika Novak, Sjors Timmer

The Fabrika Split project explores the impact of wearable displays on people and society. Through the development of iWear, a t-shirt computer that allows people to interact with their digital content on their body, we raise concerns on how technological advancements change our daily routines. What happens when personal messages are displayed in the open? What kind of body movements will we use to access our content? What sort of urban rituals will we develop? Through this fictional critique, Fabrika Split wants to challenge the seemingly normal behaviour that heavy smartphone usage has brought about.



The Displaced City series

Atelier leader
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Nokuna – social utopia or creative control centre?

Authors
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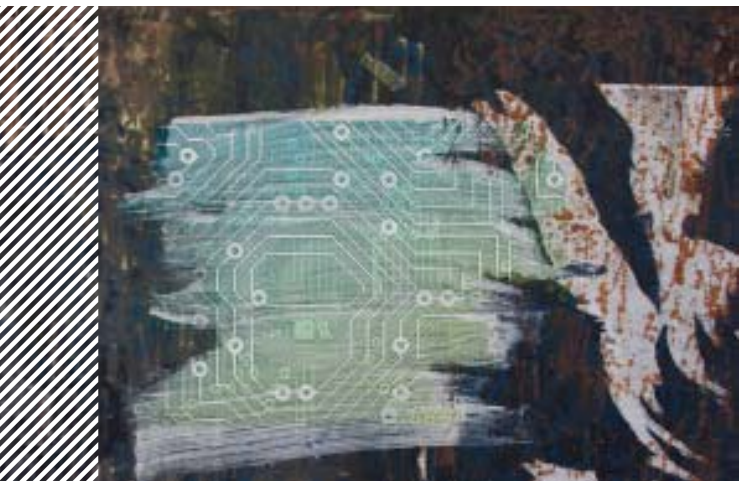
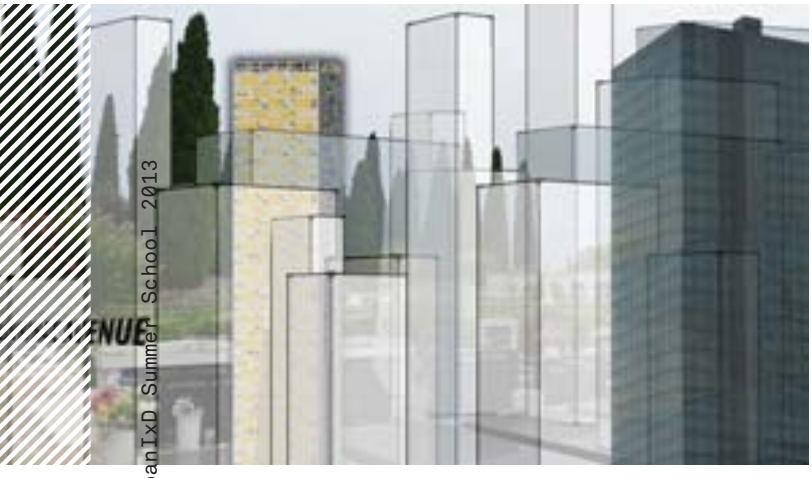


It's 2063 in the Displaced City. Nokuna is a protected region that operates on a gift economy model. The universal Bitcoin currency has had its signal blocked and is useless within Nokuna's boundaries. Helping others and supporting the city infrastructure – painting smart interface walls, watering the urban garden and removing digital waste – will determine the length of a person's stay, as well as the products and services that they can enjoy in Nokuna. Smart walls hold a crowd-sourced digital catalogue of tasks that must be downloaded and completed to grant a person more time and enjoyment in Nokuna. When you stop contributing to Nokuna's gift economy, you are 'turned off' and the system escorts you to the exit.

Necrotopia

Authors
Işıl Ruhi-Sipahioğlu, Sara Adhitya,
Jakab Pilaszanovich, Antonella Sassu



Urban population growth has reached a point where building land is scarce and precious; where citizens were forced to question even the land left to graveyards. Furthermore, going to graveyards to pay their respects has turned into an unforeseen problem for dispersed global citizens. Meanwhile, the social media interfaces have become personal memory logbooks not only for the living, but also for those who wish to pay their respects to the dead profiles.

Ultimately, these developments have led humanity to take a big step toward dealing with their physical and digital remains. They invented the Necrotopia system, in which the physical body and digital data are transformed into 'Hybrid Remains,' each the size of a small diamond. These digital diamonds are then transported in space shuttles to outer space, where they become part of the 'World Wide Dead Database. From here, a new type of satellite known as the 'Space-yard' transmits this digital dead data back down to Earth, where it can be accessed in a new type of cemetery found all around the world. The World Wide Dead cemeteries consist of 'Holograves,' holographic user interfaces allowing memory access from any city in the world. Here one can pay their respects to their lost ones, leave messages and send offerings such as digital flowers and candles.

The Necrotopia system, as any other system, may be subject to various forms of hacking; an unauthorised person may attempt to access another person's information; one may attempt to modify another's memories; and some memories may be deemed inappropriate for showing in different cultural contexts. However, the Ministry of Memories with its network of Memory Police will ensure your hybrid remains rest in peace.

Happyless

Authors
Jenny Kempson, Bastien Kerspern

What if happiness was a commodity among cities?

In 2068, governments in cities facing a growing depression decided to reactivate their program of Sister Cities. They created new exclusive partnerships to fight this depression that was ruining the productivity of almost every country. Happiness has now become one of the most precious resources of cities. A race toward unlimited growth of happiness has started. Cities now have to collaborate with each other to raise their local level of happiness. They stimulate the joy of citizens by creating new places providing activities where people can gather and celebrate to push up the happiness indicator.

The entire society has been reorganized according to the happiness policies, shaping time, interactions among people and physical spaces in the city. The infrastructure of the city has been designed to reach a daily happiness goal. Citizens have to wear bracelets measuring their happiness level, allowing authorities to track the mood of the city. In order to maintain happiness production at a constant rhythm, behaviour guides solving conflicts and timecards helping to find the right balance between work and happy times have been provided to each citizen. At the end of each day, if the happiness quota has been achieved, local governments release a cloud of happiness. This chemical cloud contains antidepressant medicine, used to sustain happiness overnight. A new range of practices also appeared in the city, from the black market selling happy boosts to accelerate the individual growth of happiness to the Enthusiasts divisions crafting a positive propaganda campaign all around the city. With happiness as a social norm, a new form of marginality was raised. Some as the Neo Luddites seek authentic happiness whereas others, The Spleens, have to hide to enjoy melancholia.

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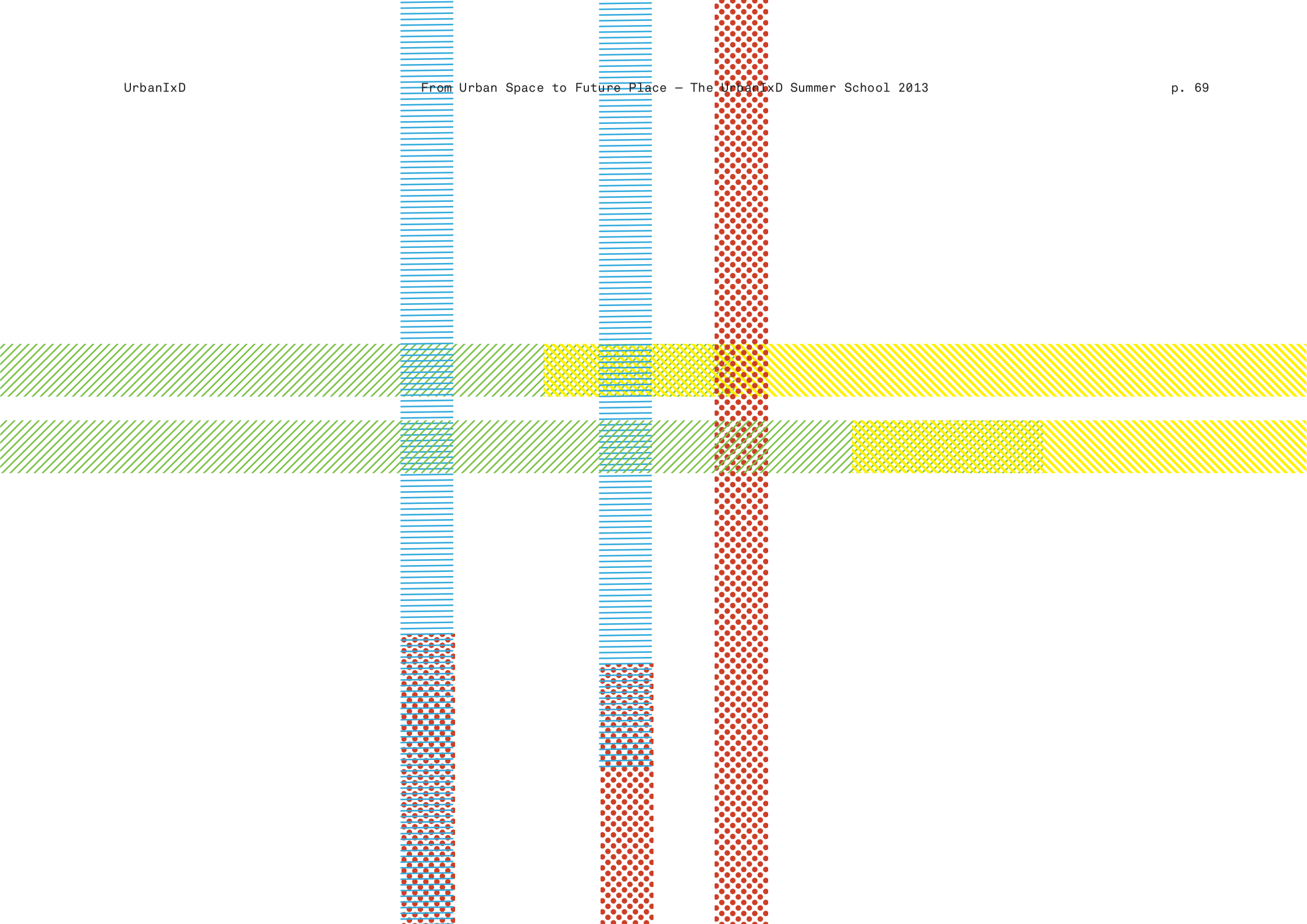

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www.urbanixd.eu

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2013 – 2014 Project Number: 323687

SEVENTH FRAMEWORK PROGRAMME

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